

Claims

- Sub B5
- 1 A strip lighting device which includes:
- an elongate housing that is at least partially translucent;
- a multiplicity of light sources arranged at intervals within said housing; and
- 5 means to diffuse, disperse or scatter light from said light sources whereby on activation of the light sources, a visible optical effect is produced when the housing is viewed from the outside.

- 2 A strip lighting device according to claim 1 wherein said housing glows so as to form a strip or line of light.

- 10 3 A strip lighting device to claim 1 or 2 wherein the housing includes multiple scattering elements so that said optical effect includes a sparkling effect.

- 15 4 A strip lighting device according to claim 1, 2 or 3 wherein said light sources are substantially not visible to the eye when not activated and viewed from outside said housing, and substantially not distinguishable when activated and viewed from outside said housing.

- 5 A strip lighting device according to ~~any one of claims 1 to 4~~ ^{claim 1} wherein said means to diffuse, disperse or scatter light includes a body portion of said housing.

- Sub B6
- 20 6 A strip lighting device according to ~~any preceding claim~~ ^{claim 1} wherein said means to diffuse light, disperse or scatter includes or further includes light diffuser means in said passageway.

- 7 A strip lighting device according to ~~any preceding claim~~ ^{claim 1} wherein said light sources are semi-conductor devices such as light emitting diode (LED) devices.

- Sub E0
- 8 A strip lighting device according to ~~any preceding claim~~ ^{claim 1} wherein an outer or front

face of the elongate housing is defined by a transversely domed or convex segment.

9 A strip lighting device according to ^{claim 1} ~~any one of claims 1 to 8~~ wherein said housing is solid, being moulded about said light sources or having one or more cavities to receive said light sources.

5 10 A strip lighting device according to ^{claim 1} ~~any one of claims 1 to 8~~ wherein said housing is hollow and defines a passageway extending longitudinally of the housing, and said light sources are disposed in said passageway.

11 A strip lighting device according to ^{claim 1} ~~any preceding claim~~ wherein said elongate housing is a plastics extrusion of substantially uniform cross-section.

10 12 A strip lighting device according to claim ¹⁰ ~~10 or 11~~ when appended directly or indirectly to claim ³ ~~7~~ wherein said semiconductor or LED devices are arranged on a printed circuit board strip extending along and mounted within said passageway.

13 A strip lighting device according to ^{claim 1} ~~any one of claims 1 to 12~~ further including means to mount the housing to a surface so that it extends along and adjacent the surface.

14 A strip lighting device according to claim 13 wherein said mounting means includes a mounting rail adapted to be fastened to said surface, and cooperable means on the rail and on said housing for effecting a snap or sliding engagement of the housing to the rail so that the housing is generally parallel to the rail.

20 15 A strip lighting device according to claim 14 wherein, on said engagement, the housing overlies said rail.

16 A strip lighting device according to claim 14 ~~or 15~~, wherein said snap or sliding engagement is between longitudinally extending rib means on one of the components, and complementary groove means on the other.

25 17 A strip lighting device according to claim 16 further including opposed longitudinal

undercut formations in said groove means.

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A strip lighting device according to ^{claim 13} ~~any one of claims 13 to 17~~, further including a face that provides a substantially planar rear engagement when the device is fastened to a surface.

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A strip lighting device according to ^{claim 13} ~~any one of claims 13 to 18~~, further including means to couple the housing to other similar housings or to other components.

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A strip lighting device according to ^{claim 19} ~~any one of claims 1 to 19~~, further including connector means to physically couple said elongate housing to a similar housing of a further device whereby the housings may be relatively longitudinally displaced in situ by thermal expansion or building subsidence, without being uncoupled.

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A strip lighting device according to claim 20 wherein said connector means includes an integral moulded body which defines a pair of generally tubular portions slidably engageable with the respective said housings so that their interiors are in communication within the connector, wherein said integral moulded body further defines a relatively thin wall portion between said generally tubular portions, said thin wall portion being resiliently deformable to compensate for relative variations in the relative positions of the generally tubular portions.

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A strip lighting device according to claim 21 wherein said integral moulded body is in a material adopted to engage and sealingly grasp the respective said housings.

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A strip lighting device according to claim 12 further including means to electrically and physically interconnect said circuit board strip to a similar circuit board strip of a similar device to which said device is coupled.

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A strip lighting device according to claim 23 wherein said means to electrically and physically interconnect includes:-

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an integral moulded body with features which define spaced generally parallel channels or passages open at their outer ends to receive respective end fingers of the

respective said strips, whereby the strips are aligned and generally co-planar;

electrically conductive contact means in said channels or passages for engaging complementary contacts on said strips when said fingers are received in the channels or fingers;

means carried by said body electrically connecting each of the contact means for one strip carried by said body with one or more of the contact means for the other strip; and

resiliently deformable means on said body for latching said body to each of said strips.

10 25 A strip lighting device according to claim 24 wherein said spaced channels are arranged along opposite sides of the integral moulded body, and open laterally from the body.

15 26 A strip lighting device according to claim 24 ~~or 25~~ wherein said resiliently deformable latch means is provided as a pair of deflectable tongue portions with lugs, which tongue portions are defined by slits in a web portion of the integral moulded body.

27 A structure having one or more features highlighted or decorated by one or more strip lighting devices according to ^{claim 1} ~~any one of claims 1 to 26~~.

20 28 A structure according to claim 27 wherein said highlighted or decorated feature of the structure is a corner or edge.

29 A structure according to claim 28 wherein said edge is an edge of a roof, a window or a door, or a corner between respective wall or roof sections.

30 A structure according to claim 28 wherein said edge is a gable or ridge line of a building roof.

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- 31 A structure according to ^{claim 28} ~~any one of claims 28 to 30~~ wherein said structure is a commercial building and the color of the or each housing is chosen to match or complement the colour(s) of identification or trade mark signage displayed on the building.

- 5 32 A housing assembly for strip lighting, including:

an elongate housing at least partly of a translucent material;

a mounting rail; and

co-operable longitudinally extending formations on said rail and on said housing for effecting a snap or sliding engagement of the housing to the rail so that the housing is generally parallel to the rail.

- 33 A housing assembly according to claim 32 wherein, on said engagement, the housing overlies said rail.

- 34 A strip lighting device according to claim 32 ~~or 33~~, wherein said snap or sliding engagement is between longitudinally extending rib means on one of the components, and complementary groove means on the other.

- 35 A housing assembly according to claim 34 further including opposed longitudinal undercut formations in said groove means.

- 36 A housing assembly according to ^{claim 32} ~~any one of claims 31 to 33~~ further including a face that provides a substantially planar rear engagement when the device is fastened to a surface.

- 37 A housing assembly according to ^{claim 32} ~~any one of claims 31 to 36~~ further including a means to couple the housing to other similar housings or to other components.

- 38 A strip lighting system, including:-

a plurality of elongate housings at least partly of a translucent material;

means in each of said housings to locate support means for a multiplicity of light sources at intervals in said housing and activatable so that the housing, when viewed from the outside through the translucent material, appears to glow and so to form a strip or line of light.

39 A connector for physically coupling a pair of tubular components, including an integral moulded body which defines a pair of generally tubular portions slidably engageable with the respective said tubular components so that their interiors are in communication within the connector;

10 wherein said integral moulded body further defines a relatively thin wall portion between said generally tubular portions, said thin wall portion being resiliently deformable to compensate for relative variations in the relative positions of the generally tubular portions.

40 A connector according to claim 39, wherein said integral moulded body is in a material adapted to engage and sealingly grasp the respective said components.

41 A connector for electrically and physically coupling a pair or more of support strips having electrically conductive surface elements including:

20 an integral moulded body with features which define spaced generally parallel channels or passages open at their outer ends to receive respective end fingers of the respective said strips, whereby the strips are aligned and generally co-planar;

electrically conductive contact means in said channels or passages for engaging complementary contacts on said strips when said fingers are received in the channels or fingers;

25 means carried by said body electrically connecting each of the contact means for one strip carried by said body with one or more of the contact means for the other strip; and

resiliently deformable means on said body for latching said body to each of said strips.

42 A connector according to claim 41 wherein said spaced channels are arranged along opposite sides of the integral moulded body, and open laterally from the body.

5 43 A connector according to claim 41 ~~or 42~~ wherein said resiliently deformable latch means is provided as a pair of deflectable tongue portions with lugs, which tongue portions are defined by slits in a web portion of the integral moulded body.